

HEAVY CONSTANT CHAINS CH3 REGION

EU INDEX	OU INDEX	INVARIANT RESIDUES	1 HUMAN IGM 'CL	2 HUMAN IGM 'CL	3 GAL	4 OU	5 BOT	6 X17115 'CL	7 GLI	8 HUMAN IGM MEMB 'CL	9 WAH	10 NIG	11 ERI	12 HUMAN IGM 'CL	13 HUMAN IGM MEMB 'CL	14 HUMAN IGM 'CL	15 OMH 'CL	16 HER	17 FRO	18 JON	19 NLS
361	341		ASP	ASP	ASP	ASP	ASP	ASP	ALA	ALA	ALA	ALA	ALA	ALA	ALA	GLY	GLY			GLY	
362	342		GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN			GLN	
363	343		ASP	ASP	ASP	ASP	ASP	ASP	ALA	ALA	ALA	ALA	ALA	ALA	ALA	GLN	GLN			GLN	
364	344		THR	THR	THR	THR	THR	THR	PRO	PRO	PRO	PRO	PRO	PRO	PRO	ARG	ARG			ARG	
365	345		ALA	ALA	ALA	ALA	ALA	ALA	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL			VAL	
366	346		ILE	ILE	ILE	ILE	ILE	ILE	LEU	LEU	LEU	LEU	LEU	LEU	LEU	LEU	LEU			LEU	
367	347		ALA	ALA	ALA	ALA	ALA	ALA	LEU	LEU	LEU	LEU	LEU	LEU	LEU	LEU	LEU			LEU	
367A			---	---	---	---	---	---	---	---	---	---	---	---	---	---	---			---	
367B			---	---	---	---	---	---	---	---	---	---	---	---	---	---	---			---	
368	348	PRO	ARG	ARG	ARG	ARG	ARG	ARG	LEU	LEU	LEU	LEU	LEU	LEU	LEU	LEU	LEU			LEU	
369	349		VAL	VAL	VAL	VAL	VAL	VAL	SER	SER	SER	SER	SER	SER	SER	SER	SER			SER	
370	350		PHE	PHE	PHE	PHE	PHE	PHE	LEU	LEU	LEU	LEU	LEU	LEU	LEU	LEU	LEU			LEU	
371	351		ALA	ALA	ALA	ALA	ALA	ALA	ASN	ASN	ASN	ASN	ASN	ASN	ASN	ASN	ASN			ASN	
372	352		ILE	ILE	ILE	ILE	ILE	ILE	LEU	LEU	LEU	LEU	LEU	LEU	LEU	LEU	LEU			LEU	
373	353		PRO	PRO	PRO	PRO	PRO	PRO	LEU	LEU	LEU	LEU	LEU	LEU	LEU	LEU	LEU			LEU	
374	354		PRO	PRO	PRO	PRO	PRO	PRO	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA			ALA	
375	355		SER	SER	SER	SER	SER	SER	SER	SER	SER	SER	SER	SER	SER	SER	SER			SER	
376	356		ALA	ALA	ALA	ALA	ALA	ALA	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP			ASP	
377	357		PHE	PHE	PHE	PHE	PHE	PHE	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO			PRO	
378	358		ILE	ILE	ILE	ILE	ILE	ILE	---	---	---	---	---	---	---	---	---			---	
379	359		SER	SER	SER	SER	SER	SER	---	---	---	---	---	---	---	---	---			---	
380	360		ILE	ILE	ILE	ILE	ILE	ILE	---	---	---	---	---	---	---	---	---			---	
381	361		PHE	PHE	PHE	PHE	PHE	PHE	---	---	---	---	---	---	---	---	---			---	
382	362		LEU	LEU	LEU	LEU	LEU	LEU	---	---	---	---	---	---	---	---	---			---	
383	363		THR	THR	THR	THR	THR	THR	---	---	---	---	---	---	---	---	---			---	
384	364		LYS	LYS	LYS	LYS	LYS	LYS	---	---	---	---	---	---	---	---	---			---	
385	365		SER	SER	SER	SER	SER	SER	---	---	---	---	---	---	---	---	---			---	
386	366		THR	THR	THR	THR	THR	THR	---	---	---	---	---	---	---	---	---			---	
387	367		LYS	LYS	LYS	LYS	LYS	LYS	---	---	---	---	---	---	---	---	---			---	
388	368		LEU	LEU	LEU	LEU	LEU	LEU	---	---	---	---	---	---	---	---	---			---	
389	369	CYS	THR	THR	THR	THR	THR	THR	---	---	---	---	---	---	---	---	---			---	
390	370		CYS	CYS	CYS	CYS	CYS	CYS	---	---	---	---	---	---	---	---	---			---	
391	371		LEU	LEU	LEU	LEU	LEU	LEU	---	---	---	---	---	---	---	---	---			---	
392	372		VAL	VAL	VAL	VAL	VAL	VAL	---	---	---	---	---	---	---	---	---			---	
393	373		THR	THR	THR	THR	THR	THR	---	---	---	---	---	---	---	---	---			---	
394	374		ASP	ASP	ASP	ASP	ASP	ASP	---	---	---	---	---	---	---	---	---			---	
395	375		LEU	LEU	LEU	LEU	LEU	LEU	---	---	---	---	---	---	---	---	---			---	
396	376		THR	THR	THR	THR	THR	THR	---	---	---	---	---	---	---	---	---			---	
397	377		THR	THR	THR	THR	THR	THR	---	---	---	---	---	---	---	---	---			---	
398	378		TYR	TYR	TYR	TYR	TYR	TYR	---	---	---	---	---	---	---	---	---			---	
399	379		ASP	ASP	ASP	ASP	ASP	ASP	---	---	---	---	---	---	---	---	---			---	
400	380		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---			---	
401	381		SER	SER	SER	SER	SER	SER	---	---	---	---	---	---	---	---	---			---	
402	382		VAL	VAL	VAL	VAL	VAL	VAL	---	---	---	---	---	---	---	---	---			---	
403	383		THR	THR	THR	THR	THR	THR	---	---	---	---	---	---	---	---	---			---	
404	384		ILE	ILE	ILE	ILE	ILE	ILE	---	---	---	---	---	---	---	---	---			---	
405	385	TRP (.95)	SER	SER	SER	SER	SER	SER	---	---	---	---	---	---	---	---	---			---	
406	386		TRP	TRP	TRP	TRP	TRP	TRP	---	---	---	---	---	---	---	---	---			---	
407	387		THR	THR	THR	THR	THR	THR	---	---	---	---	---	---	---	---	---			---	
408	388		ARG	ARG	ARG	ARG	ARG	ARG	---	---	---	---	---	---	---	---	---			---	
409	389		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---			---	
410	390		GLN	GLN	GLN	GLN	GLN	GLN	---	---	---	---	---	---	---	---	---			---	
411	391		ASN	ASN	ASN	ASN	ASN	ASN	---	---	---	---	---	---	---	---	---			---	
412	392		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---			---	
413	393		GLY	GLY	GLY	GLY	GLY	GLY	---	---	---	---	---	---	---	---	---			---	
414	394		GLU	GLU	GLU	GLU	GLU	GLU	---	---	---	---	---	---	---	---	---			---	
415	395		ALA	ALA	ALA	ALA	ALA	ALA	---	---	---	---	---	---	---	---	---			---	
416	396		VAL	VAL	VAL	VAL	VAL	VAL	---	---	---	---	---	---	---	---	---			---	
417	397		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---			---	
418	398		LYS	LYS	LYS	LYS	LYS	LYS	---	---	---	---	---	---	---	---	---			---	
419	399		THR	THR	THR	THR	THR	THR	---	---	---	---	---	---	---	---	---			---	
420	400		HIS	HIS	HIS	HIS	HIS	HIS	---	---	---	---	---	---	---	---	---			---	
421	401		THR	THR	THR	THR	THR	THR	---	---	---	---	---	---	---	---	---			---	
422	402		ASN	ASN	ASN	ASN	ASN	ASN	---	---	---	---	---	---	---	---	---			---	
423	403		ILE	ILE	ILE	ILE	ILE	ILE	---	---	---	---	---	---	---	---	---			---	
424	404		SER	SER	SER	SER	SER	SER	---	---	---	---	---	---	---	---	---			---	
425	405		GLU	GLU	GLU	GLU	GLU	GLU	---	---	---	---	---	---	---	---	---			---	
426	406		SER	SER	SER	SER	SER	SER	---	---	---	---	---	---	---	---	---			---	
427	407		HIS	HIS	HIS	HIS	HIS	HIS	---	---	---	---	---	---	---	---	---			---	
428	408		PRO	PRO	PRO	PRO	PRO	PRO	---	---	---	---	---	---	---	---	---			---	
429	409		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---			---	
430	410		ASN	ASN	ASN	ASN	ASN	ASN	---	---	---	---	---	---	---	---	---			---	
431	411		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---			---	
432	412		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---			---	
433	413		ALA	ALA	ALA	ALA	ALA	ALA	---	---	---	---	---	---	---	---	---			---	
434	414		THR	THR	THR	THR	THR	THR	---	---	---	---	---	---	---	---	---			---	
435	415		PHE	PHE	PHE	PHE	PHE	PHE	---	---	---	---	---	---	---	---	---			---	
436	416		SER	SER	SER	SER	SER	SER	---	---	---	---	---	---	---	---	---			---	
437	417		ALA	ALA	ALA	ALA	ALA	ALA	---	---	---	---	---	---	---	---	---			---	
438	418		VAL	VAL	VAL	VAL	VAL	VAL	---	---	---	---	---	---	---	---	---			---	
439	419		GLY	GLY	GLY	GLY	GLY	GLY	---	---	---	---	---	---	---	---	---			---	
440	420		GLU	GLU	GLU	GLU	GLU	GLU	---	---	---	---	---	---	---	---	---			---	
441	421		ALA	ALA	ALA	ALA	ALA	ALA	---	---	---	---	---	---	---	---	---			---	
442	422		SER	SER	SER	SER	SER	SER	---	---	---	---	---	---	---	---	---			---	
443	423		ILE	ILE	ILE	ILE	ILE	ILE	---	---	---	---	---	---	---	---	---			---	
444	424		CYS	CYS	CYS	CYS	CYS	CYS	---	---	---	---	---	---	---	---	---			---	
445	425		GLU	GLU	GLU	GLU	GLU	GLU	---	---	---	---	---	---	---	---	---			---	
446	426		ASP	ASP	ASP	ASP	ASP	ASP	---	---	---	---	---	---	---	---	---			---	
447	427		ASP	ASP	ASP	ASP	ASP	ASP	---	---	---	---	---	---	---	---	---			---	
448	428		TRP	TRP	TRP	TRP	TRP	TRP	---	---	---	---	---	---	---	---	---			---	
449	429		ASN	ASN	ASN	ASN	ASN	ASN	---	---	---	---	---	---	---	---	---			---	
450	430		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---			---	
451	431		SER	SER	SER	SER	SER	SER	---	---	---	---	---	---	---	---	---			---	
452	432		GLY	GLY	GLY	GLY	GLY	GLY	---	---	---	---	---	---	---	---	---			---	
453	433		GLU	GLU	GLU	GLU	GLU	GLU	---	---	---	---	---	---	---	---	---			---	
454	434		ARG	ARG	ARG	ARG	ARG	ARG	---	---	---	---	---	---	---	---	---			---	
455	435		PHE	PHE	PHE	PHE	PHE	PHE	---	---	---	---	---	---	---	---	---			---	
456	436		THR	THR	THR	THR	THR	THR	---	---	---	---	---	---	---	---	---			---	
457	437	CYS (.99)	CYS	CYS	CYS	CYS	CYS	CYS	---	---	---	---	---								

HEAVY CONSTANT CHAINS CH3 REGION (cont'd)

EU	OU	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43
INDEX	INDEX	SPA	ZUC	ZUC	KUP	BRU	JIR	CHA	GOE	EU	NIE	CRA	VAU	LEB	EST	YOK	SAC	HUMAN	KOL	MCG	LEC	DOB	BUR	TRO	CAR
361	341		GLY				GLY		GLY	GLY	GLY							GLY	GLY				GLY	GLY	
362		340																							
363	342	341	GLN				GLN		GLN	GLN	GLN							GLN	GLN				ASN	ASN	
364	343	342	PRO				PRO		PRO	PRO	PRO							PRO	PRO				THR	THR	
365	344	343	ARG				ARG		ARG	ARG	ARG							ARG	ARG				PHE	PHE	
366	345	344	GLX				GLU		GLU	GLU	GLU							GLU	GLU				ARG	ARG	
367	346	345	PRO				PRO		PRO	PRO	PRO							PRO	PRO				PRO	PRO	
367A																									
367B																									
368	347	346	GLX				GLN		GLN	GLN	GLN							GLN	GLN				GLN	GLN	
369	348	347	VAL				VAL		VAL	VAL	VAL							VAL	VAL				VAL	VAL	
370	349	348	TYR				TYR		TYR	TYR	TYR							TYR	TYR				HIS	HIS	
371	350	349	THR				THR		THR	THR	THR							THR	THR				THR	THR	
372	351	350	LEU				LEU		LEU	LEU	LEU							LEU	LEU				LEU	LEU	
373	352	351	PRO				PRO		PRO	PRO	PRO							PRO	PRO				PRO	PRO	
374	353	352	PRO				PRO		PRO	PRO	PRO							PRO	PRO				PRO	PRO	
375	354	353	SER				SER		SER	SER	SER							SER	SER				PRO	PRO	
376	355	354	ARG				ARG		ARG	ARG	ARG							ARG	ARG				SER	SER	
377	356	355	GLU				GLU		GLU	GLU	ASP							ASP	GLU				GLX	GLX	
378	357	356	GLU				GLU		GLU	GLU	GLU							GLU	GLU				GLX	GLN	
379		357																							
380	358	357	MET				MET		MET	MET	LEU							LEU	MET				ALA	ALA	
381	359	358	THR				THR		THR	THR	THR							THR	THR				LEU	LEU	
382	360	359	LYS				LYS		LYS	LYS	LYS							LYS	LYS				ASN	ASN	
383		360																							
384	361	361	ASN				ASN		ASN	ASN	ASN							ASN	ASN				GLX	GLN	
385	362	362	GLN				GLN		GLN	GLN	GLN							GLN	GLN				LEU	LEU	
386	363	363	VAL				VAL		VAL	VAL	VAL							VAL	VAL				VAL	VAL	
387	364	364	SER				SER		SER	SER	SER							SER	SER				THR	THR	
388	365	365	LEU				LEU		LEU	LEU	LEU							LEU	LEU				LEU	LEU	
389	366	366	THR				THR		THR	THR	THR							THR	THR				THR	THR	
390	367	367	CYS				CYS		CYS	CYS	CYS							CYS	CYS				CYS	CYS	
391	368	368	LEU				LEU		LEU	LEU	LEU							LEU	LEU				LEU	LEU	
392	369	369	VAL				VAL		VAL	VAL	VAL							VAL	VAL				ALA	ALA	
393	370	370	LYS				LYS		LYS	LYS	LYS							LYS	LYS				ARG	ARG	
394	371	371	GLY				GLY		GLY	GLY	GLY							GLY	GLY				GLY	GLY	
395	372	372	PHE				PHE		PHE	PHE	PHE							PHE	PHE				PHE	PHE	
396	373	373	TYR				TYR		TYR	TYR	TYR							TYR	TYR				SER	SER	
397	374	374	PRO				PRO		PRO	PRO	PRO							PRO	PRO				PRO	PRO	
398	375	375	SER				SER		SER	SER	SER							SER	SER				LYS	LYS	
399	376	376	ASP				ASP		ASP	ASP	ASP							ASP	ASP				ASP	ASP	
400	377	377	ILE				ILE		ILE	ILE	ILE							ILE	ILE				VAL	VAL	
401	378	378	ALA				ALA		ALA	ALA	ALA							ALA	ALA				LEU	LEU	
402	379	379	VAL				VAL		VAL	VAL	VAL							VAL	VAL				VAL	VAL	
403		379																							
404		380																							
405	380	381	GLU				GLU		GLU	GLU	GLU							GLU	GLU				ARG	ARG	
406	381	382	TRP				TRP		TRP	TRP	TRP							TRP	TRP				TRP	TRP	
407	382	383	GLU				GLU		GLU	GLU	GLU							GLU	GLU				LEU	LEU	
408	383	384	SER				SER		SER	SER	SER							SER	SER						
409																									
410	384	385	SER				ASP		ASN	ASN	ASN							ASN	ASN				GLN	GLN	
411	385	386	GLY				GLY		ASP	ASP	ASP							GLY	ASP				GLY	GLY	
412																									
413																									
414	386	387	GLN				GLU		GLY	GLY	GLY							GLY	GLN				GLU	GLU	
415	387	388	PRO				PRO		GLU	GLU	GLU							GLN	GLN				LEU	LEU	
416	388	389	GLU				GLU		PRO	PRO	PRO							PRO	PRO				PRO	PRO	
417	389	390	ASN				ASN		GLU	GLU	GLU							GLU	GLU				ARG	ARG	
418	390	391	ASN				ASN		ASN	ASN	ASN							ASN	ASN				GLU	GLU	
419	391	392	TYR				TYR		TYR	TYR	TYR							TYR	TYR				LYS	LYS	
420	392	393	ASN				LYS		LYS	LYS	LYS							LYS	LYS				THR	THR	
421	393	394	THR				THR		THR	THR	THR							THR	THR				THR	THR	
422	394	395	THR				THR		THR	THR	THR							THR	THR				TRP	TRP	
423	395	396	PRO				PRO		PRO	PRO	PRO							PRO	PRO				ALA	ALA	
424	396	397	PRO				PRO		PRO	PRO	PRO							PRO	PRO				SER	SER	
425	397	398	MET				VAL		VAL	VAL	VAL							VAL	VAL				ARG	ARG	
426	398	399	LEU				LEU		LEU	LEU	LEU							LEU	LEU				GLN	GLN	
427	399	400	ASP				ASP		ASP	ASP	ASP							ASP	ASP				GLU	GLN	
428	400	401	SER				SER		SER	SER	SER							SER	SER				PRO	PRO	
429																							SER	SER	
430	401	402	ASP				ASP		ASP	ASP	ASP							ASP	ASP				GLN	GLN	
431																							GLY	GLY	
432																							THR	THR	
433	402	403	GLY				GLY		GLY	GLY	GLY							GLY	GLY				THR	THR	
434	403	404	SER				SER		SER	SER	SER							SER	SER				THR	THR	
435	404	405	PHE				PHE		PHE	PHE	PHE							PHE	PHE				PHE	PHE	
436	405	406	PHE				PHE		PHE	PHE	PHE							PHE	PHE				ALA	ALA	
437	406	407	LEU				LEU		LEU	LEU	LEU							LEU	LEU				VAL	VAL	
438	407	408	TYR				TYR		TYR	TYR	TYR							TYR	TYR				THR	THR	
439	408	409	SER				SER		SER	SER	SER							SER	SER				THR	THR	
440	409	410	LYS				LYS		LYS	LYS	LYS							LYS	LYS				ILE	ILE	
441	410	411	LEU				LEU		LEU	LEU	LEU							LEU	LEU				LEU	LEU	
442	411	412	THR				THR		THR	THR	THR							THR	THR				ARG	ARG	
443	412	413	VAL				VAL		VAL	VAL	VAL							VAL	VAL				VAL	VAL	
444	413	414	ASP				ASP		ASP	ASP	ASP														

BEST AVAILABLE COPY

HEAVY CONSTANT CHAINS C83 REGION (cont'd)

EU INDEX	OU INDEX	63 HUMAN IGA2 'CL	64 HUMAN IGA2 'CL	65 HUMAN IGA2 'CL	66 IGM 'CL	67 IGM 'CL	68 IGM-b 'CL	69 MUTANT 102 'CL	70 MOPC 104E	71 MOPC 104E MEMB 'CL	72 HPC76 'CL	73 G8 CA 1.7 'CL	74 GAT50 'CL	75 IGD 'CL	76 IGD SECR 'CL	77 IGD MEMB 'CL	78 B1-8 DELTA	79 MOUSE 1303 'CL	80 1303 MEMB 'CL	81 1303 'CL
361	341		GLY	GLY	---	---	---	---	---	---	---	---	---	GLY	---	---	---	GLY	---	---
362	342	340	---	---	SER	SER	SER	---	SER	---	---	---	---	ALA	---	---	---	---	---	---
363	342	341	ASN	ASN	PRO	PRO	PRO	---	PRO	---	---	---	---	MET	---	---	---	---	---	---
364	343	342	THR	THR	SER	SER	SER	---	THR	---	---	---	---	ALA	---	---	---	---	---	---
365	344	343	PHE	PHE	THR	THR	THR	---	THR	---	---	---	---	PRC	---	---	---	---	---	---
366	345	344	ARG	ARG	ASP	ASP	ASP	---	ASP	---	---	---	---	SER	---	---	---	---	---	---
367	346	345	PRO	PRO	ILE	ILE	ILE	---	ILE	---	---	---	---	ASN	---	---	---	---	---	---
367A			---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
367B			---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
368	347	346	GLU	GLU	LEU	LEU	LEU	---	LEU	---	---	---	---	LEU	---	---	---	---	---	---
369	348	347	VAL	VAL	THR	THR	THR	---	ASN	---	---	---	---	THR	---	---	---	---	---	---
370	348	348	HIS	HIS	PHE	PHE	PHE	---	PHE	---	---	---	---	ASN	---	---	---	---	---	---
371	350	349	LEU	LEU	THR	THR	THR	---	THR	---	---	---	---	THR	---	---	---	---	---	---
372	351	350	LEU	LEU	ILE	ILE	ILE	---	ILE	---	---	---	---	ILE	---	---	---	---	---	---
373	352	351	PRO	PRO	PRO	PRO	PRO	---	PRO	---	---	---	---	LEU	---	---	---	---	---	---
374	353	352	PRO	PRO	PRO	PRO	PRO	---	PRO	---	---	---	---	THR	---	---	---	---	---	---
375	354	353	PRO	PRO	SER	SER	SER	---	SER	---	---	---	---	THR	---	---	---	---	---	---
376	355	354	SER	SER	---	---	---	---	---	---	---	---	---	SER	---	---	---	---	---	---
377	356	354	GLU	GLU	PHE	PHE	PHE	---	PHE	---	---	---	---	SER	---	---	---	---	---	---
378	357	355	GLU	GLU	ALA	ALA	ALA	---	ALA	---	---	---	---	HIS	---	---	---	---	---	---
379		356	---	---	ASP	ASP	ASP	---	ASP	---	---	---	---	---	---	---	---	---	---	---
380		357	LEU	LEU	ILE	ILE	ILE	---	ILE	---	---	---	---	---	---	---	---	---	---	---
381	358	358	ALA	ALA	PHE	PHE	PHE	---	PHE	---	---	---	---	PRO	---	---	---	---	---	---
382	359	359	LEU	LEU	LEU	LEU	LEU	---	LEU	---	---	---	---	GLU	---	---	---	---	---	---
383	360	360	ASN	ASN	SER	SER	SER	---	SER	---	---	---	---	MET	---	---	---	---	---	---
384	361	361	GLU	GLU	LYS	LYS	LYS	---	LYS	---	---	---	---	SER	---	---	---	---	---	---
385	362	362	LEU	LEU	SER	SER	SER	---	SER	---	---	---	---	SER	---	---	---	---	---	---
386	363	363	VAL	VAL	ALA	ALA	ALA	---	ALA	---	---	---	---	SER	---	---	---	---	---	---
387	364	364	THR	THR	ASN	ASN	ASN	---	THR	---	---	---	---	TRP	---	---	---	---	---	---
388	365	365	LEU	LEU	LEU	LEU	LEU	---	LEU	---	---	---	---	LEU	---	---	---	---	---	---
389	366	366	THR	THR	THR	THR	THR	---	THR	---	---	---	---	LEU	---	---	---	---	---	---
390	367	367	CYS	CYS	CYS	CYS	CYS	---	CYS	---	---	---	---	CYS	---	---	---	---	---	---
391	368	368	LEU	LEU	LEU	LEU	LEU	---	LEU	---	---	---	---	GLU	---	---	---	---	---	---
392	369	369	ALA	ALA	VAL	VAL	VAL	---	VAL	---	---	---	---	VAL	---	---	---	---	---	---
393	370	370	ARG	ARG	SER	SER	SER	---	SER	---	---	---	---	SER	---	---	---	---	---	---
394	371	371	GLY	GLY	ASN	ASN	ASN	---	ASN	---	---	---	---	GLY	---	---	---	---	---	---
395	372	372	PHE	PHE	LEU	LEU	LEU	---	LEU	---	---	---	---	PHE	---	---	---	---	---	---
396	373	373	SER	SER	ALA	ALA	ALA	---	ALA	---	---	---	---	PHE	---	---	---	---	---	---
397	374	374	PRO	PRO	THR	THR	THR	---	THR	---	---	---	---	PRO	---	---	---	---	---	---
398	375	375	LYS	LYS	TYR	TYR	TYR	---	TYR	---	---	---	---	GLU	---	---	---	---	---	---
399	376	376	ASP	ASP	GLU	GLU	GLU	---	GLU	---	---	---	---	ASN	---	---	---	---	---	---
400	377	377	VAL	VAL	---	---	---	---	---	---	---	---	---	ILE	---	---	---	---	---	---
401	378	378	LEU	LEU	THR	THR	THR	---	THR	---	---	---	---	HIS	---	---	---	---	---	---
402	379	379	VAL	VAL	LEU	LEU	LEU	---	LEU	---	---	---	---	LEU	---	---	---	---	---	---
403			---	---	ASN	ASN	ASN	---	THR	---	---	---	---	---	---	---	---	---	---	---
404		380	---	---	ILE	ILE	ILE	---	ILE	---	---	---	---	---	---	---	---	---	---	---
405	380	381	ARG	ARG	SER	SER	SER	---	SER	---	---	---	---	---	---	---	---	---	---	---
406	381	382	TRP	TRP	TRP	TRP	TRP	---	TRP	---	---	---	---	---	---	---	---	---	---	---
407	382	383	LEU	LEU	ALA	ALA	ALA	---	ALA	---	---	---	---	GLU	---	---	---	---	---	---
408	383	384	---	---	SER	SER	SER	---	SER	---	---	---	---	GLY	---	---	---	---	---	---
409			---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
410	384	385	GLN	GLN	---	---	---	---	---	---	---	---	---	VAL	---	---	---	---	---	---
411	385	386	SER	SER	GLN	GLN	GLN	---	GLN	---	---	---	---	HIS	---	---	---	---	---	---
412			GLN	GLN	---	---	---	---	SER	---	---	---	---	SER	---	---	---	---	---	---
413			---	---	---	---	---	---	---	---	---	---	---	LYS	---	---	---	---	---	---
414	386	387	GLU	GLU	---	---	---	---	---	---	---	---	---	MET	---	---	---	---	---	---
415	387	388	LEU	LEU	GLY	GLY	GLY	---	GLY	---	---	---	---	LYS	---	---	---	---	---	---
416	388	389	PRO	PRO	GLU	GLU	GLU	---	GLU	---	---	---	---	SER	---	---	---	---	---	---
417	389	390	ARG	ARG	PRO	PRO	PRO	---	PRO	---	---	---	---	THR	---	---	---	---	---	---
418	390	391	LYS	LYS	LEU	LEU	LEU	---	LEU	---	---	---	---	ASN	---	---	---	---	---	---
419	391	392	TYR	TYR	THR	THR	THR	---	GLU	---	---	---	---	PHE	---	---	---	---	---	---
420	392	393	LEU	LEU	LYS	LYS	LYS	---	LYS	---	---	---	---	THR	---	---	---	---	---	---
421	393	394	THR	THR	ILE	ILE	ILE	---	ILE	---	---	---	---	ALA	---	---	---	---	---	---
422	394	395	TRP	TRP	LYS	LYS	LYS	---	LYS	---	---	---	---	ASN	---	---	---	---	---	---
423	395	396	ALA	ALA	ILE	ILE	ILE	---	ILE	---	---	---	---	PRO	---	---	---	---	---	---
424	396	397	SER	SER	MET	MET	MET	---	MET	---	---	---	---	THR	---	---	---	---	---	---
425	397	398	ARG	ARG	GLU	GLU	GLU	---	GLU	---	---	---	---	ALA	---	---	---	---	---	---
426	398	399	GLN	GLN	SER	SER	SER	---	SER	---	---	---	---	PRO	---	---	---	---	---	---
427	399	400	GLU	GLU	HIS	HIS	HIS	---	HIS	---	---	---	---	ALA	---	---	---	---	---	---
428	400	401	PRO	PRO	PRO	PRO	PRO	---	PRO	---	---	---	---	GLY	---	---	---	---	---	---
429			SER	SER	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
430	401	402	GLN	GLN	ASN	ASN	ASN	---	ASN	---	---	---	---	---	---	---	---	---	---	---
431			GLY	GLY	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
432			THR	THR	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
433	402	403	THR	THR	GLY	GLY	GLY	---	GLY	---	---	---	---	GLY	---	---	---	---	---	---
434	403	404	THR	THR	THR	THR	THR	---	THR	---	---	---	---	THR	---	---	---	---	---	---
435	404	405	PHE	TYR	PHE	PHE	PHE	---	PHE	---	---	---	---	PHE	---	---	---	---	---	---
436	405	406	ALA	ALA	SER	SER	SER	---	SER	---	---	---	---	GLN	---	---	---	---	---	---
437	406	407	VAL	VAL	ALA	ALA	ALA	---	ALA	---	---	---	---	THR	---	---	---	---	---	---
438	407	408	THR	THR	LYS	LYS	LYS	---	LYS	---	---	---	---	TRP	---	---	---	---	---	---
439	408	409	SER	SER	GLY	GLY	GLY	---	GLY	---	---	---	---	SER	---	---	---	---	---	---
440	409	410	ILE	ILE	VAL	VAL	VAL	---	VAL	---	---	---	---	VAL	---	---	---	---	---	---
441	410	411	LEU	LEU	ALA	ALA	ALA	---	ALA	---	---	---	---	LEU	---	---	---	---	---	---
442	411	412	ARG	ARG	SER	SER	SER	---	SER	---	---	---	---	ARG	---	---	---	---	---	---
443	412	413	VAL	VAL	VAL	VAL	VAL	---	VAL	---	---	---	---	LEU	---	---	---	---	---	---
444	413	414	ALA	ALA	CYS	CYS	CYS	---	CYS	---	---	---	---	PRO	---	---	---	---	---	---
445	414	415	ALA	ALA	VAL	VAL	VAL	---	VAL	---	---	---	---	VAL	---	---	---	---	---	---
446	415	416	GLU	GLU	GLU	GLU	GLU	---	GLU	---	---	---	---	ALA	---	---	---	---	---	---
447	416	417	ASP	ASP	ASP	ASP	ASP	---	ASP	---	---	---	---	LEU	---	---	---	---	---	---
448	417	418	TRP	TRP	TRP	TRP	TRP	---	TRP	---	---	---	---	SER	---	---	---	---	---	---
449	418	419	LYS	LYS	ASN	ASN	ASN	---	ASN	---	---	---	---	SER	---	---	---	---	---	---
450	419	420	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
451	420	421	LYS	LYS	ASN	ASN	ASN	---	ASN	---	---	---	---	SER	---	---	---	---	---	---
452	421	422	GLY	GLY	ARG	ARG	ARG	---	ARG	---	---	---	---	LEU	---	---	---	---	---	---
453	422	423	ASP	GLU	LYS	LYS	LYS	---	GLY	---	---	---	---	ASP	---	---	---	---	---	---
454																				

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HEAVY CONSTANT CHAINS CH3 REGION. (cont'd)

101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	525	526	527	528	529	530	531	532	533	534	535	536	537	538	539	540	541	542	543	544	545	546	547	548	549	550	551	552	553	554	555	556	557	558	559	560	561	562	563	564	565	566	567	568	569	570	571	572	573	574	575	576	577	578	579	580	581	582	583	584	585	586	587	588	589	590	591	592	593	594	595	596	597	598	599	600	601	602	603	604	605	606	607	608	609	610	611	612	613	614	615	616	617	618	619	620	621	622	623	624	625	626	627	628	629	630	631	632	633	634	635	636	637	638	639	640	641	642	643	644	645	646	647	648	649	650	651	652	653	654	655	656	657	658	659	660	661	662	663	664	665	666	667	668	669	670	671	672	673	674	675	676	677	678	679	680	681	682	683	684	685	686	687	688	689	690	691	692	693	694	695	696	697	698	699	700	701	702	703	704	705	706	707	708	709	710	711	712	713	714	715	716	717	718	719	720	721	722	723	724	725	726	727	728	729	730	731	732	733	734	735	736	737	738	739	740	741	742	743	744	745	746	747	748	749	750	751	752	753	754	755	756	757	758	759	760	761	762	763	764	765	766	767	768	769	770	771	772	773	774	775	776	777	778	779	780	781	782	783	784	785	786	787	788	789	790	791	792	793	794	795	796	797	798	799	800	801	802	803	804	805	806	807	808	809	810	811	812	813	814	815	816	817	818	819	820	821	822	823	824	825	826	827	828	829	830	831	832	833	834	835	836	837	838	839	840	841	842	843	844	845	846	847	848	849	850	851	852	853	854	855	856	857	858	859	860	861	862	863	864	865	866	867	868	869	870	871	872	873	874	875	876	877	878	879	880	881	882	883	884	885	886	887	888	889	890	891	892	893	894	895	896	897	898	899	900	901	902	903	904	905	906	907	908	909	910	911	912	913	914	915	916	917	918	919	920	921	922	923	924	925	926	927	928	929	930	931	932	933	934	935	936	937	938	939	940	941	942	943	944	945	946	947	948	949	950	951	952	953	954	955	956	957	958	959	960	961	962	963	964	965	966	967	968	969	970	971	972	973	974	975	976	977	978	979	980	981	982	983	984	985	986	987	988	989	990	991	992	993	994	995	996	997	998	999	1000
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HEAVY CONSTANT CHAINS CH3 REGION (cont'd)

EU INDEX	OU INDEX	123 RABBIT IGG	124 PGAMMA B1-12, 14'CL	125 RAB IGG	126 RAB IGG	127 P2A2 39-1A, 20B 'CL	128 PA19 'CL	129 CT-12	130 PIKA	131 HA-3	132 HA-11	133 HA-1	134 HA-5	135 HA-LT	136 SYRIAN HAMSTER IGM 'CL	137 GP IGG1	138 GP IGG1	139 GP IGG1	140 GP IGG1	141 MOC
361	341		GLY	GLY	GLY	GLY	---								GLY	---	GLY	GLY	GLY	---
362		340	---	---	---	---	VAL	---							---	---	---	---	---	ASP
363	342	341	GLN	GLU	GLN	GLN	VAL	---							GLU	---	---	ALA	GLN	---
364	343	342	PRO	PRO	PRO	PRO	THR	---							ALA	---	---	PRO	PRO	---
365	344	343	LEU	LEU	LEU	LEU	---	---							LEU	---	---	ARG	ARG	VAL
366	345	344	GLU	GLU	GLU	GLU	PRO	---							GLU	---	---	ILE	MET	GLY
367	346	345	PRR	PRR	PRR	PRR	---	---							ILE	---	---	PRO	PRO	---
367A			---	---	---	---	---	---							---	---	---	---	---	---
367B			---	---	---	---	---	---							---	---	---	---	---	---
368	347	346	LYS	LYS	LYS	LYS	GLN	---							LYS	---	---	ASP	SER	---
369	348	347	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	GLX	GLX	VAL	VAL	ILE
370	349	348	TYR	TYR	TYR	TYR	HIS	TYR	TYR	TYR	TYR	TYR	TYR	TYR	TYR	TYR	TYR	TYR	TYR	PHE
371	350	349	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR
372	351	350	MET	MET	MET	MET	LEU	LEU	LEU	LEU	LEU	LEU	LEU	LEU	LEU	LEU	LEU	LEU	LEU	ILE
373	352	351	GLY	GLY	GLY	GLY	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO
374	353	352	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO
375	354	353	ARG	ARG	ARG	ARG	ARG	ARG	ARG	ARG	ARG	ARG	ARG	ARG	ARG	ARG	ARG	ARG	ARG	---
376	355		GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	ALA
377	356	354	GLU	GLN	GLU	GLU	---	---							---	---	---	---	---	---
378	357	355	---	---	---	---	---	---							---	---	---	---	---	---
379		356	---	---	---	---	---	---							---	---	---	---	---	---
380		357	---	---	---	---	---	---							---	---	---	---	---	---
381	358	358	LEU	LEU	LEU	LEU	LEU	LEU	LEU	LEU	LEU	LEU	LEU	LEU	LEU	LEU	LEU	LEU	LEU	---
382	359	359	SER	SER	SER	SER	SER	SER	SER	SER	SER	SER	SER	SER	SER	SER	SER	SER	SER	---
383	360	360	SER	SER	SER	SER	ASN	---							ASN	---	---	LYS	LYS	THR
384	361	361	ARG	ARG	ARG	ARG	GLU	---							LYS	---	---	LYS	LYS	---
385	362	362	SER	SER	SER	SER	SER	---							SER	---	---	LYS	LYS	SER
386	363	363	VAL	VAL	VAL	VAL	VAL	---							ALA	---	---	VAL	VAL	ALA
387	364	364	SER	SER	SER	SER	THR	---							THR	---	---	SER	SER	LYS
388	365	365	LEU	LEU	LEU	LEU	LEU	---							LEU	---	---	LEU	LEU	LEU
389	366	366	THR	THR	THR	THR	THR	---							THR	---	---	THR	THR	SER
390	367	367	CYS	CYS	CYS	CYS	CYS	---							CYS	---	---	CYS	CYS	---
391	368	368	MET	MET	MET	MET	LEU	---							LEU	---	---	MET	MET	LEU
392	369	369	ILE	ILE	ILE	ILE	ILE	---							ILE	---	---	ILE	ILE	VAL
393	370	370	ASN	ASP	ASN	ASN	ARG	---							THR	---	---	THR	THR	ILE
394	371	371	GLY	GLY	GLY	GLY	GLY	---							ASN	---	---	GLY	GLY	ASN
395	372	372	PHE	PHE	PHE	PHE	PHE	---							LEU	---	---	PHE	PHE	LEU
396	373	373	TYR	TYR	TYR	TYR	TYR	---							ALA	---	---	TYR	TYR	PHE
397	374	374	PRO	PRO	PRO	PRO	PRO	---							THR	---	---	PRO	PRO	ALA
398	375	375	SER	SER	SER	SER	LYS	---							TYR	---	---	ALA	ALA	TYR
399	376	376	ASP	ASP	ASP	ASP	ASP	---							ASP	---	---	ASP	ASP	ASP
400	377		ILE	ILE	ILE	ILE	VAL	---							---	---	---	ILE	ILE	---
401	378	377	SER	SER	SER	SER	LEU	---							THR	---	---	ASN	ASN	HIS
402	379	378	VAL	VAL	VAL	VAL	VAL	---							LEU	---	---	VAL	VAL	VAL
403		379	---	---	---	---	---	---							ASN	---	---	---	---	THR
404		380	---	---	---	---	---	---							---	---	---	---	---	---
405	380	380	GLU	GLY	GLU	GLU	GLU	SER	---						ILE	---	---	GLU	GLU	---
406	381	382	TRP	TRP	TRP	TRP	TRP	---							TRP	---	---	TRP	TRP	TRP
407	382	383	GLU	GLU	GLU	GLU	GLU	ARG	---						SER	---	---	ASP	ASP	ALA
408	383	384	LYS	LYS	LYS	LYS	LYS	HIS	---						SER	---	---	SER	SER	ARG
409			---	---	---	---	---	---							---	---	---	---	---	---
410	384	385	ASN	ASP	ASN	ASN	GLN	---							ARG	---	---	SER	ASN	GLU
411	385	386	GLY	GLY	GLY	GLY	GLY	---							SER	---	---	GLX	GLX	GLU
412			---	---	---	---	---	---							---	---	---	---	---	---
413			---	---	---	---	---	---							---	---	---	---	---	---
414	386	387	LYS	LYS	LYS	LYS	VAL	---							GLY	---	---	PRO	PRO	---
415	387	388	ALA	ALA	ALA	ALA	PRO	---							GLU	---	---	SER	SER	GLY
416	388	389	GLU	GLU	GLU	GLU	GLU	---							PRO	---	---	ASP	ASP	GLU
417	389	390	ASP	ASP	ASP	ASP	ASP	---							LEU	---	---	---	---	LEU
418	390	391	ASN	ASN	ASN	ASN	ASN	---							GLU	---	---	---	---	---
419	391	392	TYR	TYR	TYR	TYR	PHE	---							THR	---	---	TYR	TYR	THR
420	392	393	LYS	LYS	LYS	LYS	LEU	---							LYS	---	---	LYS	LYS	HIS
421	393	394	THR	THR	THR	THR	VAL	---							THR	---	---	ASN	ASN	THR
422	394	395	THR	THR	THR	THR	TRP	---							LYS	---	---	THR	THR	ASN
423	395	396	PRO	PRO	PRO	PRO	LYS	---							LEU	---	---	PRO	PRO	ILE
424	396	397	ALA	ALA	ALA	ALA	SER	---							THR	---	---	PRO	PRO	ILE
425	397	398	VAL	VAL	VAL	VAL	MET	---							GLU	---	---	VAL	VAL	GLU
426	398	399	LEU	LEU	LEU	LEU	PRO	---							SER	---	---	PHE	PHE	SER
427	399	400	ASP	ASP	ASP	ASP	GLU	---							HIS	---	---	ASP	ASP	HIS
428	400	401	SER	SER	SER	SER	SER	---							PRO	---	---	SER	THR	ALA
429			---	---	---	---	---	---							---	---	---	---	---	---
430	401	402	ASP	ASP	ASP	ASP	GLN	---							ASN	---	---	ASP	ASP	ASN
431			---	---	---	---	---	---							---	---	---	---	---	---
432			---	---	---	---	---	---							---	---	---	---	---	---
433	402	403	GLY	GLY	GLY	GLY	ALA	---							GLY	---	---	GLU	GLY	GLY
434	403	404	SER	SER	SER	SER	THR	---							THR	---	---	THR	THR	SER
435	404	405	TYR	TRP	TYR	TYR	TYR	---							PHE	---	---	PHE	PHE	TYR
436	405	406	PHE	PHE	PHE	PHE	ALA	---							SER	---	---	PHE	PHE	SER
437	406	407	LEU	LEU	LEU	LEU	ILE	---							ALA	---	---	LEU	LEU	ALA
438	407	408	TYR	TYR	TYR	TYR	THR	---							ILE	---	---	TYR	TYR	MET
439	408	409	ASN	SER	SER	SER	SER	---							GLY	---	---	SER	SER	GLY
440	409	410	LYS	LYS	LYS	LYS	LEU	---							GLU	---	---	ARG	ARG	GLU
441	410	411	LEU	LEU	LEU	LEU	LEU	---							ALA	---	---	LEU	LEU	ALA
442	411	412	SER	SER	SER	SER	ARG	---							ASN	---	---	LYS	LYS	THR
443	412	413	VAL	VAL	VAL	VAL	VAL	---							VAL	---	---	VAL	VAL	VAL
444	413	414	PRO	PRO	PRO	PRO	PRO	---							CYS	---	---	ASP	ASP	CYS
445	414	415	THR	THR	THR	THR	ALA	---							VAL	---	---	THR	THR	LYS
446	415	416	SER	SER	SER	SER	GLU	---							GLU	---	---	ASN	ASN	SER
447	416	417	GLU	GLU	GLU	GLU	ASP	---							ASP	---	---	ALA	ALA	GLU
448	417	418	TRP	TRP	TRP	TRP	TRP	---							TRP	---	---	TRP	TRP	TRP
449	418	419	GLN	GLN	GLN	GLN	ASN	---							ASP	---	---	ASN	ASN	GLU
450		420	---	---	---	---	---	---							---	---	---	---	---	---
451	420	421	ARG	ARG	ARG	ARG	GLN	---							SER	---	---	ASN	GLN	SER
452	421	422	GLY	GLY	GLY	GLY	GLY	---							GLY	---	---	GLY	GLY	GLY
453	422	423	ASP	ASP	ASP	ASP	ASP	---							LYS	---	---	GLU	GLU	THR
454	423	424	VAL	VAL	VAL	VAL	VAL	---							GLU	---	---	SER	SER	GLN
455	424	425	PHE	PHE	PHE	PHE	TYR	---							P					

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		CL	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL
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362		340	---				VAL	---	VAL	---	ALA	ILE				
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374	353	352	PRO				PRO	---	PRO	---	PRO	---				
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379	358	356	---				ASP	---	GLU	---	ASP	---				
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382	359	359	SER				ILE	---	LEU	---	VAL	---				
383	360	360	LYS				SER	---	GLN	---	THR	---				
384	361	361	SER				LYS	---	GLN	---	LYS	---				
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388	365	365	VAL				LEU	---	LEU	---	VAL	---				
389	366	366	THR				THR	---	THR	---	TYR	---				
390	367	367	CYS				CYS	---	CYS	---	CYS	---				
391	368	368	LEU				ARG	---	LYS	---	VAL	---				
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397	374	374	PRO				ASN	---	ASP	---	SER	---				
398	375	375	ASP				ALA	---	GLY	---	THR	---				
399	376	376	TYR				ASP	---	VAL	---	ASP	---				
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403		379	---				---	---	---	---	---	---				
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405	381	381	GLU				SER	---	TRP	---	GLN	---				
406	382	382	TRP				TRP	---	GLU	---	TRP	---				
407	383	383	GLN				TRP	---	VAL	---	SER	---				
408	384	384	LYS				LYS	---	GLY	---	ARG	---				
409			---				---	---	---	---	---	---				
410	384	385	ASN				GLU	---	SER	---	SER	---				
411	385	386	GLY				LYS	---	GLY	---	GLY	---				
412			GLN				---	---	---	---	---	---				
413			PRO				---	---	---	---	---	---				
414	386	387	GLU				GLY	---	VAL	---	LYS	---				
415	387	388	SER				GLY	---	ARG	---	LYS	---				
416	388	389	GLU				VAL	---	PRO	---	ALA	---				
417	389	390	ASP				LEU	---	GLY	---	ILE	---				
418	390	391	LYS				GLU	---	GLN	---	ALA	---				
419	391	392	TYR				THR	---	PHE	---	PHE	---				
420	392	393	GLY				ALA	---	ASP	---	ASP	---				
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425	397	398	GLN				VAL	---	ILE	---	GLY	---				
426	398	399	LEU				LEU	---	SER	---	ALA	---				
427	399	400	ASP				GLN	---	LYS	---	TYR	---				
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433	402	403	GLY				GLY	---	TYR	---	GLY	---				
434	403	404	SER				LEU	---	GLU	---	THR	---				
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437	406	407	LEU				VAL	---	LYS	---	VAL	---				
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439	408	409	SER				GLY	---	ARG	---	SER	---				
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443	412	413	VAL				VAL	---	THR	---	ILE	---				
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446	415	416	ASN				SER	---	VAL	---	GLY	---				
447	416	417	SER				GLU	---	GLU	---	ASP	---				
448	417	418	TRP				TRP	---	HIS	---	TRP	---				
449	418	419	GLN				ASP	---	SER	---	GLU	---				
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457	426	427	VAL				LYS	---	TYR	---	LYS	---				
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474	443	443	LYS				LYS	---	ALA	---	LYS	---				
475	444	444	PRO				THR	---	PRO	---	SER	---				
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411	385	386			87	8, 9	34 (GLY)	20., 23.
412					19	4	10 (GLN)	7.6
413					28	6	12 (GLU)	14.
414	386	387			86	11	21 (GLY)	45.
415	387	388			88	12	28 (PRO)	38.
416	388	389			88	11, 12	35 (GLU), 34 (GLU)	28., 31.
417	389	390			83	5	18 (GLU)	41.
418	390	391			86	10	37 (ASN), 36 (ASN)	23., 24.
419	391	392			87	10	47 (TYR)	19.
420	392	393			89	11	40 (LYS)	24.
421	393	394			88	12	44 (THR)	24.
422	394	395			88	10, 11	37 (THR)	24., 26.
423	395	396			88	10	32 (PRO)	27.
424	396	397			88	11	37 (PRO)	26.
425	397	398			88	12	24 (VAL)	44.
426	398	399			87	13	33 (LEU)	34.
427	399	400			88	12	37 (ASP)	29.
428	400	401			84	11	35 (SER)	26.
429		401			16	3	11 (SER)	4.4
430	401	402			85	6	42 (ASP), 40 (ASP)	12., 13.
431					14	2	11 (GLY)	3.8
432					15	5	8 (THR)	9.4
433	402	403			88	9	54 (GLY)	15.
434	403	404			88	7	45 (THR)	12.
435	404	405			88	7	45 (PHE)	14.
436	405	406			88	8	41 (PHE)	17.
437	406	407			88	7	30 (LEU)	21.
438	407	408			89	10	42 (TYR)	21.
439	408	409			88	4	72 (SER)	4.9
440	409	410			89	5	38 (LYS)	16.
441	410	411			88	5	72 (LEU)	6.1
442	411	412			87	8	23 (ARG)	30.
443	412	413			89	5	76 (VAL)	5.9
444	413	414			90	10	26 (ASP)	35.
445	414	415			90	7	31 (LYS)	25.
446	415	416			90	11	33 (SER)	30.
447	416	417			91	10	36 (ASP), 31 (ASP)	25., 29.
448	417	418			89	4	82 (TRP)	4.3
449	418	419			91	12	25 (GLN), 24 (GLN)	44., 45.
450	419	420			1	1	1 (ASP)	
451	420	421			91	10	1 (LEU)	
452	421	422			90	8	28 (GLN), 27 (GLN)	32., 34.
453	422	423			91	9	71 (GLY)	10.
454	423	424			89	11	25 (ASP), 24 (+)	33., 34.
455	424	425			91	3	25 (THR)	39.
456	425	426			90	7	60 (PHE)	4.5
457	426	427			90	2	36 (SER)	17.
458	427	428			89	10	89 (CYS)	2.
459	428	429			91	10	35 (SER)	25.
460	429	430			92	10	90 (VAL)	2.
461	430	431			93	3	26 (MET)	35.
462	431	432			94	8	91 (HIS)	3.1
463	432	433			94	6	59 (GLU)	13.
464	433	434			95	5	42 (ALA)	13.
465	434	435			95	7	81 (LEU)	5.9
466	435	436			95	10	43 (PRO)	15.
467	436	437			95	12	45 (ASN)	21.
468	437	438			94	10	38 (HIS)	30.
469	438	439			94	6	26 (TYR)	36.
470	439	440			93	7	50 (THR)	7.6
471	440	441			90	6	43 (GLN)	15.
472	441	442			95	7	64 (LYS)	8.4
473	442	443			94	9	53 (SER)	13.
474	443	444			95	8	52 (ILE)	16.
475	444	445			95	7	1 (ILE)	
476	445	446			95	8	64 (SER)	12.
477	446	447			95	10	39 (ARG)	17.
478					66	3	42 (SER)	18.
					43	4	44 (PRO)	22.
							59 (GLY)	3.4
							36 (LYS)	4.8

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